

servation. Many of the results are still contradictory and far from conclusive; in fact, this is a field of applied ecology demanding further study. Within a given climatic zone we ought to be able to associate soil types with weeds, and so prepare a soil map accurate enough for working purposes from surface observations of the arable land flora alone, with quite a limited amount of checking by analysis.

Another question to which Dr. Brenchley devotes a good deal of attention is that of the viability of seeds as bearing on the unexpected flora which often appears on the bared surface of a railway cutting, a newly ploughed field that has been long in grass, or even the spoil heap of subsoil from a well or a ditch. Rank luxuriant charlock almost invariably springs up, yet it is difficult to see either how that somewhat heavy seed could be carried there, or that it could have been dormant in the soil. Charlock has been observed to cover a piece of newly ploughed moorland, broken up for the first time in its history so far as was known, and remote from any other arable land. The oldest inhabitants always know that certain fields will be smothered with charlock if they are ploughed deep, or broken up from grass after a long term of years. Yet the viability of seeds when stored is not great, nor do Dr. Kidd's experiments on the retarding effect of carbon dioxide on germination quite decide the question. Under ordinary conditions a seed continues to respire as long as it is alive; in the long-stored wheats at Rothamsted, for example, the embryo is burnt out, as it were. But under suitable conditions—say, of the carbon dioxide content of the air—can the seed assume a static condition and yet retain its germinating capacity, its life, for an exceptional term of years? Dr. Brenchley's figures for the number of arable seeds that germinated in samples of soil from different depths taken from land which had been down in grass for various periods indicate a progressive dying off of the buried seed, the numbers being comparatively few after thirty years of grass. But the subject would repay further study, especially as regards charlock.

One of the best of Dr. Brenchley's chapters deals with the prevention and eradication of weeds; they may be summed up in good cultivation and a sound rotation; smother crops are only effective to keep, not to make, land clean. Chemical methods have their occasional uses, like spraying with copper sulphate solution for charlock, but no farmer should need them after he has once got his land in order.

Dr. Brenchley's book should find its place in all agricultural libraries; it has the vividness and

interest of the record of personal observation and thought that no mere compilation ever possesses. A word of praise should also be given to the illustrations; the photographs of parasitic plants attached to their hosts will be of interest to many botanists, while the drawings are new and characteristic.

A. D. H.

Facts and Theories for the Social Worker.

- (1) *An Introduction to Sociology: For Social Workers and General Readers.* By Prof. J. J. Findlay. Pp. xi+304. (Manchester: At the University Press; London: Longmans, Green, and Co., 1920.) Price 6s. net.
- (2) *The Social Worker.* By C. R. Attlee. (The Social Service Library.) Pp. viii+286. (London: G. Bell and Sons, Ltd., 1920.) Price 6s. net.

(1) "THE 'unit' in sociology is the group." Throughout this "Introduction to Sociology" the author holds fast to this basal conception, and amid his many excursions into varied fields of study he is constantly turning back to the "group," unfolding its many implications, and by its means striking a path "through the jungle of social questions."

In this treatment of the group conception emerges the author's view that "the political philosophers have been far too prone to present an antithesis between The State and The Individual, whereas the conflict should always be viewed as between The State and The Voluntary Group." The former method gives a false superiority to the State, and begs the question of the place of the other groups in the life of the community. But if we throw over the supreme authority of the State we are left with two alternatives, neither of which seems satisfactory. We may elevate some other group to the highest place; the Syndicalist, for example, would make the group of producers supreme. That way lies no solution, for the association of producers is less representative than the State as it exists at present. We may, on the other hand, with Mr. G. D. H. Cole, attempt to balance the producers' association (The National Guild) by a consumers' association; but even so we are driven to look for a third group with authority over both; and Mr. Cole's *tertium quid* resolves itself into something not unlike our present State. Prof. Findlay does not aim at a final solution of this problem. "A new region," he says, "now awaits to be explored; . . . the various groups which, under the ægis of the democratic State, have developed self-consciousness and power, must now be brought into harmonious relation with each other and with the

State which claims to be their master." But in his discussion there is much that is suggestive and illuminating.

In his chapter on occupation and leisure the author finds the contrast between profession and trade to lie in the fact that the former is based on service, the latter on exchange, and he sees hope for the future in the thought that "society has never accepted the economic basis." Industry must be professionalised. This can be done—it was done during the war—through the trade unions and the employers' associations realising that they exist "to do the work of the trade, to produce the goods."

The book is fresh, alive, and interesting. The author holds that we "must begin with the present: describing and defining what we witness with all the power of abstraction we possess." Hence we find less in this book about the Todas and more about the League of Nations than in most treatises on sociology. Perhaps for an "Introduction" its very facility will prove to some extent a drawback. The simplicity of outline which the beginner demands is lost in the wealth of illustration and in the multitude of apt comments in many spheres of present and past experience. But the system is there if the reader has the wit to come by it; and the student of sociology who reads the book will go back to his task with renewed vigour.

(2) It is not very long since the only picture called up by the term "social worker" was that of an unprepossessing female, of uncertain age, but of undoubted respectability, who periodically descended from her refined atmosphere to view the lives of those strange beings "the poor." But the rapid extension of the sphere of State activity; the devolution of administrative functions to local bodies, and of advisory, and sometimes of executive, functions to workers, voluntary and official, paid and unpaid; the quickening of the social consciousness of the Church; and, perhaps most of all, the awakened self-consciousness of the working classes, no longer content to be experimented upon, but resolved to work out their own solution of whatever social ills they are heir to—all this has made the ordinary citizen aware to a fuller extent than ever before of his social responsibilities. If we are not all "social workers," we have at least come to pay tribute to the value and the difficulty of the services which the "social worker" performs.

Major Attlee in his book explores the wider denotation of the term. He reviews the opportunities for social service, in the charitable society, the prison, the mission, and the Church; in connection with the Poor Law,

the Labour Exchange, the Care Committee, the Public Health bodies; and even in the trade union, the friendly society, and the co-operative society. All these are grist to Major Attlee's mill; and rightly so. The social fabric has become self-conscious through and through, and since in this new age these activities must be performed, it is desirable that they should be performed with intelligence and enlightenment. The book is full, racy, written, and made alive with interesting first-hand illustration. Not only to the aspiring social worker, but also to those who are old in the service, and to the ordinary citizen, the book should prove a mine of information and a particularly inspiring example of the spirit in which the social worker should pursue his task.

The volume is the first of a series to be entitled "The Social Service Library" and edited by the present author. We look forward with interest to the publication of the other volumes in the series.

Our Bookshelf.

A Dictionary of Scientific Terms: Pronunciation, Derivation, and Definition of Terms in Biology, Botany, Zoology, Anatomy, Cytology, Embryology, Physiology. By I. F. Henderson and Dr. W. D. Henderson. Pp. viii+354. (Edinburgh and London: Oliver and Boyd, 1920.) Price 18s. net.

THE present work contains definitions of about 10,000 terms, including several hundred lately coined expressions, many of which have not hitherto appeared in a dictionary. In a first edition all the attempts at definition are not likely to be happy: "coelom" is "a cavity of the body derived from the mesoblast"; "coelomoduct," "the duct leading directly from the genital cavity to the exterior in Cephalopods and in Annulates"; "nephridium," "any excretory organ, usually the excretory organ of Invertebrates"; "micro-nephridia" is not given, though the obsolete and misleading "plectonephridia" appears; "sclerotome," "a partition of connective tissue between two myotomes"; "notochord" is not given, though "vertebra" is; "acanthin," "a substance like chitin, strontium sulphate, forming the skeleton of the Radiolarians"; "nanoplankton," "microscopic plankton"; "entelechy," "the realisation of forms in plant and animal life which have the power of reproducing their kind."

Alternative pronunciations are frequently given, as "different centres of learning have different types of pronunciation"; but one may seriously question the admissibility of many of these—e.g. of accenting "abdomen" and "gluteus" on the first syllable, or "popliteal" on the second, or "madrepore" and "mediastinum" on the third; while the only pronunciations given for "lorica," "vesica," and "posticous" (on the first